Genetic instability of commercial *Saccharomyces cerevisiae* strains recovered from vineyard's microflora

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From spontaneous fermentations carried out with grapes collected in vineyards from the Vinho Verde Region, 101 isolates were recovered whose mitochondrial DNA restriction length polymorphism (mtDNA RFLP) were identical to strain Zymaflore VL1, a commercial strain (Lallemand) that has been used by the wineries in the last years. Genetic polymorphisms were evaluated by microsatellite analysis, interdelta sequence analysis and chromosomal karyotyping comparatively to those of 30 isolates of the original commercialized strain.

Our data show that the recovered commercial yeast isolates present a considerable genetic instability that can be assessed by distinct methods. Microsatellite allelic polymorphisms were found in 12 natural isolates, two of them were characterized by complete loss of heterozygosity, whereas their chromosomal constitution showed a loss of structural heteromorphism. Major changes of chromosomal patterns were found among the natural isolates, apparent by the absence or changed position of bands in the presumable region of chromosomes VI and III. Interdelta amplification patterns depended on the primer pair used, and changes were apparent by additional bands. Whether these changes are associated with the yeast's permanence in natural environments is subject of current investigations.

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